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Raynold M. Kahn

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SCHMIDT, KARL L

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/758,818	Applicant(s) KAHN ET AL.	
	Examiner KARI L. SCHMIDT	Art Unit 2139	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/15/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Notice to Applicant

This communication is in response to the amendment filed on 11/29/2007.

Claims 1-48 remain pending and have been amended. Claims 1, 7, 13, 22, 31, and 38 have been amended, and 45-48 have been added.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 and 45-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raike et al. (US 2002/0162104 A1) in view of Son et al. (US 2001/0017920 A1) and in further view of Akiyama (US 2002/0001386 A1).

Claims 1 and 7

Raike discloses a method of distributing program materials received from a broadcast system between a host receiver and a client receiver for remote decryption (see at

least, [0038]: the examiner notes consumers or end-users who wish to have access to encrypted media through the use of client devices (e.g. set-top boxes) is the client receiver and the retail server is the host receiver), comprising: encrypting a media key at the host receiver using a client key (see at least, [0038]); (d) transferring the encrypted media key from the host receiver to the client receiver, wherein the client receiver does not utilize a conditional access module (see at least, [0017]); (e) decrypting the encrypted media encryption key at the client receiver using the client key (see at least, [0018]); (f) receiving encrypted program materials from the broadcast system at the host receiver (see at least, [0007], [0009] and [0015]); (g) transferring the encrypted program materials from the host receiver to the client receiver (see at least, [0020]); (h) decrypting the encrypted program materials at the client receiver using the decrypted media encryption key (see at least, [0021]).

Raike fails to disclose (a) receiving an encrypted media encryption key at the host receiver; (b) decrypting the encrypted media encryption key at the host receiver; and (c) re-encrypting the decrypted media encryption key at the host receiver using a pairing key.

However, in an analogous art Son discloses (a) receiving a encrypted data at the host receiver (see at least, [0027]-[0029]: the examiner notes that a store, decrypt and re-encrypt process may be performed on any data (e.g. media key)); and (b) decrypting the encrypted data at the host receiver (see at least, [0027]-[0029]: the examiner notes that a store, decrypt and re-encrypt process may be performed on any data); (c) re-

encrypting data at the host receiver using a key (see at least, [0027]-[0030]: the examiner notes a public key encryption).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Raike's media key to include (a) receiving a encrypted data at the host receiver; and (b) decrypting the encrypted data at the host receiver (c) re-encrypting data at the host receiver using a key as taught by Son. One of ordinary skill in the art would have been motivated to combine the teachings in order to provide a extra level of cryptography on the actual media key in order to make it more secure (see at least, Son, [0030]).

Raike in view of Son fails to disclose the use of a pairing key for content between the host receiver and the client receiver.

However, in an analogous art Akiyama discloses conditional access system when each receiver apparatus has an individual master key (see at least, [0099]). Akiyama teaches that the conditional access system adopts a key configuration, as shown in, e.g., FIG. 3 (see at least, [0100]). More specifically the examiner notes a work key K_w (i.e. a pairing key) which is specified for each channel and is common to all receiver apparatuses is encrypted using an individual master key K_M , and the encrypted key is sent. Furthermore, a channel key K_{ch} is encrypted using that work key K_w , and the encrypted key is sent (e.g. from the Host) (see at least, [0101]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Raike in view of Son's re-encrypted media key to include the use of a pairing key as the tool for encrypting content between

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a host receiver and a client receiver as taught by Akiyama. One of ordinary skill in the art would have been motivated to combine the teachings in order to minimize transmission volume by the use of a paring key (see at least, Akiyama, [0100]).

Claims 2 and 8

Raike fails to disclose further comprising decrypting the encrypted program materials at the host receiver using the decrypted media encryption key.

However, in an analogous art Son discloses further comprising decrypting the encrypted program materials at the host receiver using the decrypted media encryption key (see at least, [0031]-[0032]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Raike's media key to include further comprising decrypting the encrypted program materials at the host receiver using the decrypted media encryption key as taught by Son. One of ordinary skill in the art would have been motivated to combine the teachings in order to provide a extra level of cryptography on the actual media key in order to make it more secure (see at least, Son, [0030]).

Claims 3 and 9

Raike in view of Son fails to disclose further comprising receiving the pairing key from the broadcast system at both the host receiver and client receiver.

However, in an analogous art Akiyama discloses conditional access system when each receiver apparatus has an individual master key (see at least, [0099]). Akiyama teaches that the conditional access system adopts a key configuration, as shown in, e.g., FIG. 3 (see at least, [0100]). More specifically the examiner notes a work key K_w (i.e. a pairing key) which is specified for each channel and is common to all receiver apparatuses is encrypted using an individual master key K_M , and the encrypted key is sent. Furthermore, a channel key K_{ch} is encrypted using that work key K_w , and the encrypted key is sent (see at least, [0101]). The examiner notes that the K_w is therefore both broadcasted and known at both the host receiver and client receiver in order for use with the K_{ch} and K_M .

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Raike in view of Son's re-encrypted media key to include broadcasting the pairing key from the broadcast system at both the host receiver and the client receiver as taught by Akiyama. One of ordinary skill in the art would have been motivated to combine the teachings in order to minimize transmission volume by the use of a pairing key (see at least, Akiyama, [0100]).

Claims 4-5 and 10-11

Raike fails to disclose the use of a pairing key and the host receiver and client receiver decrypting the pairing key using uniquely associated keys to both the host receiver and client receiver.

However, in an analogous art Son discloses decrypting the data using uniquely associated keys to both the host receiver and client receiver (see at least, [0030]: the examiner notes the use of a private key for server and subscriber station).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Raike's media key to include decrypting the key using uniquely associated keys to both the host receiver and client receiver as taught by Son. One of ordinary skill in the art would have been motivated to combine the teachings in order to provide a extra level of cryptography on the actual media key in order to make it more secure (see at least, Son, [0030]).

Raike in view of Son fails to disclose the use of a pairing key for content between the host receiver and the client receiver.

However, in an analogous art Akiyama discloses conditional access system when each receiver apparatus has an individual master key (see at least, [0099]). Akiyama teaches that the conditional access system adopts a key configuration, as shown in, e.g., FIG. 3 (see at least, [0100]). More specifically the examiner notes a work key K_w (i.e. a pairing key) which is specified for each channel and is common to all receiver apparatuses is encrypted using an individual master key K_M , and the

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encrypted key is sent. Furthermore, a channel key K_{ch} is encrypted using that work key K_w, and the encrypted key is sent (see at least, [0101]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Raike in view of Son's re-encrypted media key to include the use of a pairing key as the tool for encrypting content between a host receiver and a client receiver as taught by Akiyama. One of ordinary skill in the art would have been motivated to combine the teachings in order to minimize transmission volume by the use of a pairing key (see at least, Akiyama, [0100]).

Claims 6 and 12

Raike fails to disclose the use of a pairing key transferring the pairing key from the host receiver to the client receiver.

However, in an analogous art Son discloses transporting a key from the source to the server via a communication channel (see at least, [0040]) and further from transferring the key from the server to the subscriber via a communication channel (see at least, [0030])

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Raike's media key to include transferring a key from the host receiver to the client receiver as taught by Son. One of ordinary skill in the art would have been motivated to combine the teachings in order to provide a extra level of cryptography on the actual media key in order to make it more secure (see at least, Son, [0030]).

Raike in view of Son fails to disclose the use of a pairing key for content between the host receiver and the client receiver.

However, in an analogous art Akiyama discloses conditional access system when each receiver apparatus has an individual master key (see at least, [0099]). Akiyama teaches that the conditional access system adopts a key configuration, as shown in, e.g., FIG. 3 (see at least, [0100]). More specifically the examiner notes a work key K_w (i.e. a pairing key) which is specified for each channel and is common to all receiver apparatuses is encrypted using an individual master key K_M , and the encrypted key is sent. Furthermore, a channel key K_{ch} is encrypted using that work key K_w , and the encrypted key is sent (see at least, [0101]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Raike in view of Son's re-encrypted media key to include the use of a pairing key as the tool for encrypting content between a host receiver and a client receiver as taught by Akiyama. One of ordinary skill in the art would have been motivated to combine the teachings in order to minimize transmission volume by the use of a pairing key (see at least, Akiyama, [0100]).

Claims 45 and 46

Raike discloses wherein the client receiver does not comprise a tuner (see at least, [0038]: the examiner notes set-top boxes are not turners).

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Claims 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raike et al. (US 2002/0162104 A1) in view of Son et al. (US 2001/0017920 A1) and Akiyama (US 2002/0001386 A1) in further view of Loisel (US 2003/0026428 A1).

Claims 47 and 48

Raike in view of Son and Akiyama disclose all elements of the claimed invention however fail to disclose wherein the host receiver utilizes a conditional access module (CAM).

However, in an analogous art Loisel discloses wherein the host receiver utilizes a conditional access module (CAM) (see at least, [0023]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Raike in view of Son and Akiyama to include wherein the host receiver utilizes a conditional access module (CAM) as taught by Loisel. One of ordinary skill in the art would have been motivated to combine the teachings in order to allow for secret encrypted communication between paired devices (see at least, Loisel, [0002]).

Claims 13-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raike et al. (US 2002/0162104 A1) in view of Loisel (US 2003/0026428 A1) and Son et al. (US 2001/0017920 A1) and Akiyama (US 2002/0001386 A1).

Claims 13, 22, 31, 36-38, and 43-44

Raike discloses a method of distributing program materials received from a broadcast system between a host receiver and a client receiver for remote decryption (see at least, [0038]: the examiner notes consumers or end-users who wish to have access to encrypted media through the use of client devices (e.g. set-top boxes) is the client receiver and the retail server is the host receiver), comprising: encrypting a media key at the host receiver using a client key (see at least, [0038]); transferring the encrypted media key from the host receiver to the client receiver, wherein the client receiver does not utilize a conditional access module (see at least, [0017]); decrypting the encrypted media encryption key at the client receiver using the client key (see at least, [0018]); receiving encrypted program materials from the broadcast system at the host receiver (see at least, [0007], [0009] and [0015]); transferring the encrypted program materials from the host receiver to the client receiver (see at least, [0020]); decrypting the encrypted program materials at the client receiver using the decrypted media encryption key (see at least, [0021]).

Raike fails to disclose wherein the host receiver utilizes a conditional access module (CAM) and receiving an encrypted media encryption key at the cam/host receiver; decrypting the encrypted media encryption key at the cam/host receiver; and

re-encrypting the decrypted media encryption key at the cam/host receiver using a pairing key.

However, in an analogous art Loisel discloses wherein the host receiver utilizes a conditional access module (CAM) (see at least, [0023]) and further pairing of the host receiver and CAM for a secure communication session (see at least, [0002]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Raïke to include wherein the host receiver utilizes a conditional access module CAM as taught by Loisel. One of ordinary skill in the art would have been motivated to combine the teachings in order to allow for secret encrypted communication between paired devices (see at least, Loisel, [0002])

Raïke in view of Loisel fails to disclose receiving an encrypted media encryption key at the cam/host receiver; decrypting the encrypted media encryption key at the cam/host receiver; and re-encrypting the decrypted media encryption key at the cam/host receiver using a pairing key.

However, in an analogous art Son discloses receiving a encrypted data at the receiver (see at least, [0027]-[0029]: the examiner notes that a store, decrypt and re-encrypt process may be performed on any data (e.g. media key)); and decrypting the encrypted data at the receiver (see at least, [0027]-[0029]: the examiner notes that a store, decrypt and re-encrypt process may be performed on any data); re-encrypting data at the receiver using a key (see at least, [0027]-[0029]: the examiner notes a public key encryption) .

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Raike's in view of Loisel's media key and (CAM) to include receiving a encrypted data at the receiver; and decrypting the encrypted data at the receiver re-encrypting data at the receiver using a key as taught by Son. One of ordinary skill in the art would have been motivated to combine the teachings in order to provide a extra level of cryptography on the actual media key in order to make it more secure (see at least, Son, [0030]).

Raike in view of Loisel and Son fails to disclose the use of a pairing key for content between the host receiver and the client receiver.

However, in an analogous art Akiyama discloses conditional access system when each receiver apparatus has an individual master key (see at least, [0099]). Akiyama teaches that the conditional access system adopts a key configuration, as shown in, e.g., FIG. 3 (see at least, [0100]). More specifically the examiner notes a work key K_w (i.e. a pairing key) which is specified for each channel and is common to all receiver apparatuses is encrypted using an individual master key K_M , and the encrypted key is sent. Furthermore, a channel key K_{ch} is encrypted using that work key K_w , and the encrypted key is sent (see at least, [0101]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Raike in view of and Loisel and Son's re-encrypted cam/host media key to include the use of a pairing key as the tool for encrypting content between a host receiver and a client receiver as taught by Akiyama. One of ordinary skill in the art would have been motivated to combine the teachings in

order to minimize transmission volume by the use of a pairing key (see at least, Akiyama, [0100]).

Claims 14 and 23

Raike fails to disclose further comprising decrypting the encrypted program materials received from the broadcast system at the host receiver using the decrypted media encryption key.

However, in an analogous art Son discloses further comprising decrypting the encrypted program materials received from the broadcast system at the host receiver using the decrypted media encryption key (see at least, [0031]-[0032]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Raike's media key to include further comprising decrypting the encrypted program materials received from the broadcast system at the host receiver using the decrypted media encryption key as taught by Son. One of ordinary skill in the art would have been motivated to combine the teachings in order to provide a extra level of cryptography on the actual media key in order to make it more secure (see at least, Son, [0030]).

Claims 15, 18, 24, 27, 32 and 39

Raike fails to disclose receiving the first pairing key from the broadcast system at both the host receiver and the conditional access module (CAM) and the client receiver.

However, in an analogous art Loisel discloses wherein the host receiver utilizes a conditional access module (CAM) (see at least, [0023]) and further pairing of the host receiver and CAM for a secure communication session (see at least, [0002]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Raike to include wherein the host receiver utilizes a conditional access module CAM as taught by Loisel. One of ordinary skill in the art would have been motivated to combine the teachings in order to allow for secret encrypted communication between paired devices (see at least, Loisel, [0002]).

Raike in view of Loisel and Son fails to disclose the use of a pairing key for content between the host receiver and the CAM and the client receiver.

However, in an analogous art Akiyama discloses conditional access system when each receiver apparatus has an individual master key (see at least, [0099]). Akiyama teaches that the conditional access system adopts a key configuration, as shown in, e.g., FIG. 3 (see at least, [0100]). More specifically the examiner notes a work key K_w (i.e. a pairing key) which is specified for each channel and is common to all receiver apparatuses is encrypted using an individual master key K_M , and the encrypted key is sent. Furthermore, a channel key K_{ch} is encrypted using that work key K_w , and the encrypted key is sent (see at least, [0101]). The examiner notes that the K_w is therefore both broadcasted and known at both the host receiver and client receiver in order for use with the K_{ch} and K_M .

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Raike in view of Son's re-encrypted

media key to include broadcasting the pairing key from the broadcast system at both the host receiver, CAM, and the client receiver as taught by Akiyama. One of ordinary skill in the art would have been motivated to combine the teachings in order to minimize transmission volume by the use of a pairing key (see at least, Akiyama, [0100]).

Claims 16-17, 19-20, 25-26, 28-29, 33-34 and 40-41

Raike fails to disclose the use of a pairing key and the host receiver, CAM, and client receiver decrypting the pairing key using uniquely associated keys to both the host receiver, CAM, and client receiver.

However, in an analogous art Loisel discloses wherein the host receiver utilizes a conditional access module (CAM) (see at least, [0023]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Raike to include wherein the host receiver utilizes a conditional access module (CAM) as taught by Loisel. One of ordinary skill in the art would have been motivated to combine the teachings in order to allow for secret encrypted communication between paired devices (see at least, Loisel, [0002]).

Raike in view of Loisel fails to disclose the use of a pairing key and the host receiver, CAM, and client receiver decrypting the pairing key using uniquely associated keys to both the host receiver, CAM, and client receiver.

However, in an analogous art Son discloses decrypting the data using uniquely associated keys to both the host receiver and client receiver (see at least, [0030]: the

examiner notes the use of a private key for server and subscriber station). Further the examiner notes this could be performed at the CAM.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Raike in view of Loisel's media key to include decrypting the key using uniquely associated keys to both the host receiver, CAM, and client receiver as taught by Son. One of ordinary skill in the art would have been motivated to combine the teachings in order to provide a extra level of cryptography on the actual media key in order to make it more secure (see at least, Son, [0030]).

Raike in view of Loisel and Son fails to disclose the use of a pairing key for content between the host receiver, CAM, and the client receiver.

However, in an analogous art Akiyama discloses conditional access system when each receiver apparatus has an individual master key (see at least, [0099]). Akiyama teaches that the conditional access system adopts a key configuration, as shown in, e.g., FIG. 3 (see at least, [0100]). More specifically the examiner notes a work key K_w (i.e. a pairing key) which is specified for each channel and is common to all receiver apparatuses is encrypted using an individual master key K_M , and the encrypted key is sent. Furthermore, a channel key K_{ch} is encrypted using that work key K_w , and the encrypted key is sent (see at least, [0101]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Raike in view of Loisel and Son's media key to include the use of a pairing key as the tool for encrypting content between a host

receiver and a client receiver as taught by Akiyama. One of ordinary skill in the art would have been motivated to combine the teachings in order to minimize transmission volume by the use of a paring key (see at least, Akiyama, [0100]).

Claims 21, 30, 35 and 42

Raike fails to disclose the use of a pairing key transferring the paring key from the host receiver to the client receiver.

However, in an analogous art Son discloses transporting a key from the source to the server via a communication channel (see at least, [0040]) and further from transferring the key from the server to the subscriber via a communication channel (see at least, [0030])

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Raike's media key to include transferring a key from the host receiver to the client receiver as taught by Son. One of ordinary skill in the art would have been motivated to combine the teachings in order to provide a extra level of cryptography on the actual media key in order to make it more secure (see at least, Son, [0030]).

Raike in view of Son fails to disclose the use of a pairing key for content between the host receiver and the client receiver.

However, in an analogous art Akiyama discloses conditional access system when each receiver apparatus has an individual master key (see at least, [0099]).

Akiyama teaches that the conditional access system adopts a key configuration, as

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shown in, e.g., FIG. 3 (see at least, [0100]). More specifically the examiner notes a work key K_w (i.e. a pairing key) which is specified for each channel and is common to all receiver apparatuses is encrypted using an individual master key K_M , and the encrypted key is sent. Furthermore, a channel key K_{ch} is encrypted using that work key K_w , and the encrypted key is sent (see at least, [0101]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Raike in view of Son's re-encrypted media key to include the use of a pairing key as the tool for encrypting content between a host receiver and a client receiver as taught by Akiyama. One of ordinary skill in the art would have been motivated to combine the teachings in order to minimize transmission volume by the use of a pairing key (see at least, Akiyama, [0100]).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KARI L. SCHMIDT whose telephone number is (571)270-1385. The examiner can normally be reached on Monday - Friday: 7:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid can be reached on 571-272-4063. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kari L Schmidt/
Examiner, Art Unit 2139

/Matthew Heneghan/

Primary Examiner, Art Unit 2139